AMERICAN VETERINARY REVIEW,

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ORIGINAL ARTICLES.

THE HORSE'S FOOT.

By A. Zundel.

ANATOMY.

In our domestic animals we call the foot the extremity of the leg, and even only the extremity of the digit, for, considered in a zoological point of view, the foot extends from the carpus or tarsus to the last phalanx, inclusive.

The foot of the horse forms an extremely important study on account of the numerous diseases to which that member is subject, and also of the value of the motor powers required from the horse; the old horsemen expressed this importance by the aphorism, "no foot, no horse." This truth finds daily its sad applications in the premature ruin of large numbers of horses rendered useless because of the defects in their feet. All the qualities of a horse are, indeed, considerably diminished and can even be entirely destroyed, by the bad conformation or accidental alterations of those essential organs. The study of the foot of the horse has been the object of many voluminous works,

such as those of Girard, Bouley, Bracy, Clark, Anker, Leisering & Hartmann, Lafosse, Gourdon, Reynal, Defays, and many others, to which we refer for the more complete description of the organization of the foot.

This organ is composed of two orders of parts, some *internal*, organized and sensitive; the other *external*, formed of a horny, organic substance, the hoof, but entirely void of the property of vital sensitiveness. The internal parts are bones, three in number, the second and third phalanges, and the small sesamoid, which form by their reunion the articulation of the foot; special ligaments, which maintain the connections of these bones; tendons, which fill the triple office of agents of transmission of motion, articular ligaments and organs of support of the weight of the body; a fibro-cartilaginous apparatus, superadded to the third phalanx, and which completes, so to speak, posteriorly, and increases the surface by which it rests on the hoof and transmits to the ground the pressure which it receives. These are the lateral cartilages and the plantar cushion; arteries, veins, lymphatics and nerves, remarkable for their number, development and disposition; and at last, a ligamentous, sub-horny membrane, or keratogenous apparatus, forming a continuation of the skin, which surrounds the parts of the foot like a stocking, and upon which the foot rests, as a shoe on the human foot. In this apparatus are formed: the coronary band, which forms a rounded projection at the separation of the skin and the hoof, and which serves as a matrix to the periople and the wall; at its surface are seen numerous villosities or papillæ; the podophyllous or laminated tissue which is spread upon the anterior face of the third phalanx, and is remarkable by the sheet of parallel laminæ which it presents at its surface, which are separated by deep furrows in which are received the analogous laminæ of the internal face of the wall; the velvety tissue or villous tunic which covers the plantar cushion at the inferior face of the foot, and is the secreting organ of the sole and frog, its surface covered with villosities similar to those of the coronary band, and like them, of various sizes, and lodged in the porosities of the internal face of the sole and frog.

The external parts of the foot are four in number; the wall, the sole, the frog and the periople. These form, together, a horny box, the nail, or hoof, which is adapted exactly by its internal cavity to the external contour of the sub-horny membrane, contracting with it an intimate union by a reciprocal reception, and thus completing the structure of the foot, furnishing to the sensitive parts an apparatus, thick, hard, resisting and at the same time elastic, which makes one with them, and protects them against violence from the substances with which the foot, from the nature of its function, must necessarily come in contact. The horny substance which constitutes the hoof has a fibrous aspect; it is hollowed all over by cylindrical canals, whose superior extremities, widened into a funnel shape, cover the papillæ of the matrix of the hoof, either at the coronary band or velvety tissue, while the inferior opens in the wall upon the plantar border, in the sole and frog, at the external or inferior face. These canals are rectilinear, except those of the frog, which are flexuous; their diameter varies from 0, 02 to 0, 2 or 04$^{m.m.}$ These tubes are not only hollowed in the horny substance; they have also proper walls, of very great thickness, formed of numerous concentrical layers, received into each other. These are lamellæ of pavimentous epithelium, which constitute the horny tissue; in the walls of the horny tubes, they are grouped flatwise around their inferior canals, and stratified from within outwards, so as to form successive and concentrical layers; in the intertubular horn, these lamellæ are not stratified in a direction parallel to that of the tubes, but at right angles with it. Around the tubes, the lamellæ have an oblique intermediate direction. A granular opaque substance fills up the space lying between the horny tubes and the papillæ.

The hoof, which is a part of the epidermis, develops similarly, that is, by the constant formation of cells in the layer which corresponds to the mucous malpighian body, at the expense of the plasma thrown off by the numerous blood vessels of the keratogenous membrane. The velvety tissue is the starting point of the elements of the sole and frog; the perioplic band is the organ secreting the periople; and the coronary band proper, the matrix of the wall. Upon these different parts, the epithetial cells mul-

tiply, and flatten into lamellæ, in the direction of the surface of the keratogenous membrane, as they spread from it. The wall then grows from its superior to the inferior border, and the other parts of the wall from their internal to their external face. The villosities of the coronary band and of the velvety tissue are the organs around which accumulate the epithelial cells; their presence defines, consequently, the tubular structure of the horn.

The laminæ, in the physiological state, do not co-operate in a sensible manner with the formation of the wall; the keraphyllous laminæ form themselves at the coronary band, at the origin of the podophyllous; they descend with the wall, gliding at the surface of the layer of cells which separates them from the laminated tissue, a movement of descent which is facilitated, however, by the multiplication in the same direction of the said cells. When the podophyllous tissue is inflamed, whether exposed or not, its latent activity soon manifests itself. It gives rise to a great quantity of hard horn, hollowed, as seen by Gourdon, with tubes, and oblique in a direction backward. These tubes, more irregular than those of the normal wall, are disposed in a parallel series; they are in form, round, villo-papillæ, which have developed on the face border of the laminæ. In these cases of production of horn by the action of the podophyllous tissue alone, one never sees, between the sensitive laminæ, distinctly formed horny laminæ in the middle of the other cells, as it is observed in the wall proceeding from the coronary band. The horn which rises on the surface of the podophyllous, immediately after the removal of a piece of the wall, is not a permanent one; it must be replaced by the horn of the coronary band. This change is complete, microscopical examination proving that the wall which descends from the coronary band, provided with keraphyllous laminæ, engages itself under the temporary wall, and slides by the action already described over the surface of the soft cells of the laminated tissue. As soon as this tissue, modified by inflammation, is covered over by the permanent wall, its papillæ become atrophied, and its action returns to the limited boundaries of physiological condition. (*Chauveau.*)

The foot is an organ of support and an apparatus of elasticity ;

it is through it that the whole animal machine maintains its relations with the ground, and that it adapts itself in its various movements, so to speak, to its roughness. It is this that, as a last spring, distributes and modifies the force of all the movements of the horny mass of the body, whose columns, the legs, may be considered as the resultant. Intermediate with the body and the ground, the foot transmits all the actions of weight reaching it, and also between the body and the sensorium, toward which all sensations resulting from its contact with surrounding external substances return, the foot then becoming at the same time an organ of feeling. To adapt it to this triple formation, nature has given to it three properties, in appearance incompatible with each other, which it has, however, harmonized, viz: first, a very great external hardness, due to its horny envelope; second, a certain amount of flexibility, the combined result of the physical properties of its cortical envelope and of the mechanical disposition of its different parts, and thirdly, a highly developed sensibility resulting from the high organization of its tegumentary membrane. (*Bouley.*)

(*To be continued.*)

PHTHISIS PULMONALIS VERMINALIS.

By C. H. Peabody, D.V.S.

(*Read before the United States Veterinary Medical Association.*)

Mr. President and Gentlemen: Hoping the following report of some cases and autopsies made by myself on cattle suffering with phthisis pulmonalis verminalis will be interesting, I beg to ask your attention for a few minutes.

In October, 1880, I was requested by the Secretary of the Board of Health to accompany him to the village of Ashton, in the town of Cumberland, R. I., to the farm of a Mr. Jenks, and examine some cattle reported as having pleuro-pneumonia.

On arriving at the farm we obtained the following history: August 25th, 1880, Mr. J. bought, in Brighton, 47 head of calves, said to have come from New York State. On getting a short way from Brighton, some of the calves began to cough. They arrived at their destination on August 29th. Three or four days after one calf died, and then shortly after, four or five a week, then three or four a day, until we saw them.

The following symptoms were observed: A cough, short and harsh, gradually becoming hoarse, and finally assuming a muffled sound, was detected, the animals having the appearance of great fatigue. The respiration varied from 70 to 112 a minute, and was labored and abdominal, and each breath being accompanied with a slight cough or groan. Some of the calves were constipated, while others had diarrhœa.

In some of them the appetite remained good until 24 hours before death, emaciation gradually taking place. The pulse was weak and irregular. The animals stood with their backs arched; the heads down; the hind legs drawn under the body; the fore feet spread apart, with the elbows turned outwards. Frothy secretions oozed from the nostrils. The coat was staring; the skin shriveled; the eyes dull, and in a few cases there was an abundant discharge of saliva, in which was found contained filaria and their eggs, which had been coughed up. On examination of the thorax by auscultation, there was a peculiar, in some places a crackling sound; in others a loud wheezing, but no complete loss of respiration over any part of the lungs. On percussion, an abnormal resonance was observed over the greater portion of the lungs. The temperature ranged from 103 to 106 F. The duration of the disease varied from 15 to 20 days.

Having obtained the history of the disease, we proceeded to make the post-mortem of some already dead, and of some destroyed for that purpose. The description of the lesions found in one will, with slight exceptions, answer for the whole.

The first animal examined had been dead about 24 hours. In the thoracic cavity, we found an abnormal amount of serum; the membrane lining it was healthy, and the pericardium without patches of lymph or false membrane. The heart was filled

throughout with a hard coagulum. The extended surface of the lungs was paler than normal, its tissue emphysematous in places, and slightly mottled in others. Upon cutting through the large bronchia, we found a large number of thread-like worms, from ¾ of an inch to 1½ inches in length, and in knots or masses. These were immersed in frothy mucus, which seemed to fill the air passages completely.

These worms were found in every branch and ramifications of the air passages, to their utmost extremity. A few lobules seemed congested, and in some places the capillary blood vessels were broken down, and slight hemorrhage had taken place, small clots of blood being found in the bronchial tubes. It was noticed that all the tissues of that animal, as well as those of such as were killed, had a sourish smell. The lymphatic glands of the throat and abdomen were enlarged: other abdominal organs healthy.

There was no treatment pursued with the calves, beyond slight fumigations. The other cattle were treated by inhalation of burning sulphur. The internal treatment consisted of turpentine, iron and gentian, after they had been removed from the place where they had been kept. I have examined the lungs of a number of the old cattle destroyed since my first visit, and have not been able to find any of the filaria.

Allow me now to detain you a few moments longer in order to show you the size of the eggs of these worms, and to say a word as to the tenacity of life of the embryo. The specimen which I am going to present, I owe to the kindness of Mr. Norman Mason, an excellent microscopist of Providence, R. I. Upon measurement, this gentleman found the egg to be from $^1/_{300}$ to $^1/_{500}$ of an inch in diameter. In conclusion, and to show you how long after animal is destroyed, and no matter what poisonous preparation is used, life remains in the embryo, I will state that the lungs, from which these specimens were obtained, were sent to the office of the Board of Health on a Tuesday, and the examination made on Thursday. Some of the filaria were then soaked in picric acid and glycerine, from 30 to 40 minutes, and then placed under the microscope, when the embryo could be plainly seen moving in the egg.

SINGULAR CASE OF DISEASED TESTICLES.

By R. Wood, V. S.

(Read before the United States Veterinarian Association.)

June 17, my attention was called to a black stallion, 20 years old, which had been worked in an order-wagon for a grocery establishment for ten or twelve years, and up to that time had been in good health, when all at once the appetite became poor. The owner called my attention to a swelling of the off testicle, which he for the first time had seen that morning while grooming him. He informed me that the animal at the time he bought him had had one of his testicles removed, but the other could not be found. Finding by examination a small testes on the near side, and on the opposite side apparently a large tumor, I supposed the case to be one of disease of the end of the spermatic cord, and that by treatment it would possibly end in the formation of pus. I prescribed warm fomentations three times each day. On the 19th I was informed the animal was better, and was eating well and at work. Dec. 10th my services were again required; found the animal much thinner in flesh, appetite nearly gone, and upon examination found what I diagnosed as schirrous testicle, exceeding hard and painful, and the animal unable to rise without help. I was then informed that he had not been able to work for several months, and that they thought him worthless, but disliked to kill him, he being a pet of the family. But becoming tired of caring for him, sent for me to kill him. He was accordingly shot; the testicle removed; the small one weighing 3½ ounces, the large one 5½ lbs.—[The appearance and microscopical examination of the two organs will be given in our next issue. The small testicle is atrophied and the other in all probability a large sarcocele. —Ed.

TO THE PROFESSION.

By F. S. Billings, V.M.

In a certain way the Review has changed hands. It has been the organ of the profession through its Association. It is that no longer. With the late meeting in Boston this connection ceased. The Review has passed into the hands of Dr. Liautard. He alone must shoulder the whole burden. In this there is no change, for he has always carried this burden too much alone. Too much of the work of not only editing, but supplying the material for its pages, has devolved upon him. This reflects upon the profession. They are willing to pay for edification, but not willing to mutually contribute to edify and educate one another. We plead guilty, also, but, we have always thought, not without cause. What the *cause* was, is no matter; it no longer exists. Dr. Liautard having assumed the burden financially, as well as editorially, we have cheerfully given our assent to become an assistant not in name, but in deed. Deeds speak; words are soon lost. It is to be hoped that the work of supplying material for the Review will not fall entirely on the few men Dr. Liautard has asked to assist him. We shall all do our part, but it is to the outsiders that we look for aid.

The advancement of the profession as a unit, is, it is to be hoped, equally dear to every one of us. The question of the suppression of contagious animal diseases is one which is gradually assuming its proper place in this country. That of the relation of animal diseases to the public health, will not be less slowly developed. Both are *the* questions upon which the profession depends. Through these questions, we interest a nation; while as practitioners we are but of interest to the customer. As practitioners alone, we can *never* get beyond the stable door; the back door which enters to the family, to the legislative halls, to public advancement of our body, is not now, and never will be, open to or opened by the practicing veterinarian. It is only when we manifest our ability to save the community from large losses,

from contagio-infectious causes; it is only when we demonstrate our ability to become valuable and faithful guardians of the public health, more valuable in many respects than the M.D., that we can look for public advancement as a profession. The lazy men of the profession, those whose ideas never ascend above a dollar, may be satisfied with the present condition. We have too many of them; they do nothing themselves, and condemn all endeavors on the part of others' professional advancement, as the boiling over of youths, mere enthusiasts, who, in their august opinion, are everything but practical. Thankfully, while a comatose body, the profession is not all dead. There is some live wood among all this dead punk.

It is well known that there is a just need of reliable statistics, with reference to the prevalence of contagious diseases among the animals of this country, as well as of the causes which exist in them dangerous to the public health. We wish personally to advance these questions, and hereby appeal to all our colleagues, regular and irregular, to all men who have an interest in the well-being of our profession, to take note of these things, and report to us every case which comes to their knowledge, it matters not of what kind, whether rabies, glanders or pleuro-pneumonia. Especially do we desire to gain some knowledge about tuberculosis among our cattle, and trichina among our swine. In this regard we would beg our colleagues to revise their dairies and farms, and report us where tuberculosis is found, and the number of cattle on such farms or in such dairies. Causes leading to the extension of the disease, such as hereditary influences, the breathing of infected air from adjoining cattle having the disease, is an open question of no secondary value both to the profession and to cattle growers. We do not know that an authentic case of anthrax has ever been recorded in this country; but if colleagues would kindly send to us the blood, sun-dried upon glass slides, of any suspicious cases, we would be much obliged.

As to trichinosis among our swine, we should like the stumps of pillars of diaphragm from the largest number of hogs possible, from all parts of the country during the coming year. They can be packed in 5% solution of carbolic acid, in preserve jars, and

thus collected and sent to us per express, C.O.D., 155 Tremont St., Boston.

If we have this professional assistance, we promise to make a valuable report of the result thus obtained, at the end of the year, in the REVIEW.

EDITORIAL.

OUR FIFTH VOLUME.

Once more we present ourselves before our readers to thank them for their past patronage and for the assistance many of them have so kindly rendered.

In issuing the first number of the fifth volume of the REVIEW, it is gratifying to us to state that this representative of veterinary interests in the United States has met with a reception so kind, and a support so friendly, that necessity has arisen for more care, greater attention, and increased labor in its preparation than it originally demanded, and that, for this reason, the United States Veterinary Medical Association, under which it was first issued, has seen fit to relieve itself of any further control in its issue, and has transferred all its interests to the former editor.

In accepting the onerous duty of continuing the publication of the REVIEW, and all the responsibility of its issue, the editor fully appreciates the importance of the task before him; and while he deems it unnecessary for him to say that he will more than ever endeavor to do full justice to his position, and strive to lay before its readers all the current subjects of interest to the profession, he will take this opportunity to remind his friends that the pages of the REVIEW will always remain open for any article worthy of publication, which practitioners may desire to make public; and he hopes that in the future still more than in the past, members of the profession will look upon it as a means of exchanging their different views and experiences.

Fair and honest criticism will be allowed, but all personal remarks will find their way into oblivion and the waste basket.

We will take this opportunity to appeal to our friends in Canada, to not entirely forget us. The REVIEW never has been, and never will be allowed to become the representative of any particular society or association, of this college or of that school. The editor will endeavor to remain strictly what the name of the journal should indicate, above all things, American in character. To conclude, we are pleased to say that several of the most prominent veterinarians in the country have promised us their valuable assistance, and we are, therefore, able to promise a larger scope and greater variety in the style of its contents, and will the sooner be enabled to place the REVIEW in the position which such a publication is entitled to occupy, especially now that our profession is making such rapid strides in popular esteem, and the membership of the profession is so rapidly increasing in numbers and qualifications.

PATHOLOGY AND SURGERY OF THE FOOT.

Desirous of presenting our readers with as many new and original communications on veterinary matters as may be consistant with the issue of this paper, and thinking that the publication in the REVIEW might be a good medium to make public some of the European works in the most concise manner, and thus fill the need which most of our practitioners must have felt, we have solicited from Mr. Zundel, a celebrated veterinarian of Alsace-Lorraine, the authorization of translation of the articles he has written in his revised copy of the Dictionnaire of D'Arboral, upon the foot and its diseases. The gentleman has very kindly consented, and we begin to-day the publication of those articles. They will each occupy monthly pages of printed matter, and be arranged in such a manner that when completed, they may be separated from the main body of the volume of the REVIEW, and if desirable, can be bound in a separate volume, constituting then a distinct—and we need not say an excellent—

treatise upon the pathology and surgery of the foot. The only variation which we propose to make in the subject will consist in some few added remarks, relating to parts which we consider important, and to which no special reference appears in the work of Mr. Zundel.

FIGHTING PLEURO-PNEUMONIA.

Though many bills relating to the handling of contagious diseases in our domestic animals were presented to Congress during the last session, and none of them succeeded in passing, it will be gratifying, however, to know that the interests which are at stake will not be entirely overlooked. Out of the appropriation which was granted to the Department of Agriculture at Washington, a sum has been put aside for the purpose of doing what will probably be about the best thing possible under the present conditions. It is proposed to appoint in the different States regular veterinary inspectors, in fact several are already appointed, who shall have for their duty to investigate the extent of some diseases, and specially of pleuro-pneumonia, to trace all the seats and subjects of disease, to report weekly at the bureau the conditions of the stock, and thus to keep within its present boundaries the scourge where it is known to exist already. While this may seem at first sight a small way of dealing with this plague of bovines, it appears to us that some good will be obtained by this action, viz.: the prevention of its possible spreading beyond the States where it exists now, and the protection of our western herds from a possible contagion. This once obtained, it will be easy to put a value on the infected animals, and to come to a positive estimate as to the cost of stamping it out altogether from the country.

STATE PROTECTION TO VETERINARY SURGEONS IN NEW JERSEY.

We reprint elsewhere the act which was presented to the Legislature of New Jersey, and which, after having passed the

Assembly, was rejected by the Senate. Not interfering with the rights or doings of any one engaged in the practice of veterinary medicine, the bill only asks for a protection of a title for which the possessor of a regular degree has worked hard. Yet with the approbation of many of the legislators of New Jersey, the bill failed to pass in the Senate. We understand, however, that strong efforts are to be made for the reconsideration of the vote. Our friends of the little State are deserving credit for their attempt, and have our sincere wishes for success.

PLEURO-PNEUMONIA IN THE WEST.

Amongst the sensational reports which appear in the newspapers in relation to the existence of pleuro-pneumonia in our western States, none were probably more serious and apparently correct than those which were published some time ago.

The Department of Agriculture, aware of the effect that such news might have, not only in this country, but in Europe, took at once the necessary steps to investigate what truth was in it, and it will be gratifying to all interested parties to read the two letters which we publish from the veterinarian of the Department, C. P. Lyman, which establishes most evidently the falsity of the report.

NOTICE.

Mr. W. R. Jenkins, who has for several years largely given his time and attention to the veterinary branches of the book trade, and who we believe has to-day the largest assortment of veterinary works in the country, has recently purchased the plates of "Fleming's Veterinary Obstetrics," of which he thus becomes the only American publisher. He expects also to publish "Dun's Veterinary Medicines," "Hill's Manual and Diseases of the Dog," and a recent revised work on equestry, "Baucher's System of Horsemanship."

TRANSLATIONS FROM FOREIGN JOURNALS.

PHYSIOLOGICAL PATHOLOGY.

UPON THE CULTURE OF THE MICROBE OF SMALL-POX IN SHEEP

By M. H. Toussaint.

In 1863, Beale observed germs in small-pox. Hallier and Zurn, in 1867, saw them in the pustules of that disease as well as in the blood. Chauveau in 1868, in his study of viruses, noticed that the contagion of small-pox takes place by the peculiar particles which are found in the pustules. Lastly, Coze and Feltz, Klebs, Cohn, Keber, Weiger and several others have also seen a micrococcus in the serosity of the pustules, in the blood and in the secretions. But amongst these authors the interpretation of the fact differs. Thus Hallier writes that the micrococcus is a term of a generation between two fungi the *Pospororle Herbariaum* and the *Rhizopus Nigricans*. Zurn assimilates it to the micrococcus of the variola of man. He has seen in them threads which assist their motion, and particularly locates them in the cul de sac of the glands of the hair follicles. Cohn was nearer the truth. He has observed spores of $^1/_{1000}$ of a millimeter and bacteries in balls (*Kugelbacterien*) of the group of the Schizomycetes. Nowhere have I seen that the microbe has been cultured.

This disease gives rise to serious danger in some parts of France, but especially lately on the coast of the Mediterranian Sea. Brought by African sheep, in which it is harmless, it spreads rapidly, and is accompanied with loss of 60 to 70 per 100.

The disease lasts at least thirty-five days. It is almost impossible, on account of the number of animals imported,* and the

*In 1878 the number of sheep imported from Algeria to France was 733,000. It keeps increasing every year.

long quarantine they ought to be subjected to, to prevent its disasters, without interfering with the breeders; and again it is not possible, at first sight, to recognize the animals upon which it is in the period of incubation, which may last twenty days.

It is thus a serious affection, and worthy of all attention. Preservative inoculation is resorted to in some countries, but in meridional districts at least, has proved scarcely less fatal than the contagion itself, and many have given it up.

A veterinarian, M. Loubet, having sent me the serosity of a pustule of small-pox, I diluted it to the twentieth, at last, and inoculated a yearling lamb with it. After ten days it gave large local pustules of the size of a five francs piece* and a general eruption. It is from these pustules of inoculations that I obtained the serosity which I cultivated.

The cultures were made in bouillons of meat of sheep, beef, rabbits, and even of yeast. It is in that of rabbits and sheep that they succeeded best. After two or three days of culture the liquids were loaded with bacteries and spores; on the surface of the liquid, pellicles are formed, containing them in great quantity; then after four or five days, the microbes fell to the bottom in the shape of spores, and the liquid clears up.

The microbe of small-pox then presents itself under two conditions, that of bacteria and that of spores. Bacteries are very small the first day of cultivation, probably not more than one, three or four thousandths of a millimeter in length. They are very active and are seen moving rapidly under the microscope. They then lengthen and subdivide. Seldom are more than two segments seen united; sometimes, three or four; usually one of them is larger than the other. From the second to the third day of culture, the longest of the two bacteries is seen giving off two spores, one at each end, and sometimes another in its middle; the smallest bacteria usually has only one. It appears then as a minute dumbbell, the spore having a larger diameter, and sometimes reaching the one thousandth of a millimeter; it is slightly oval, and very refracting, smaller than that of anthrax. First cultures

*About the dimensions of a silver dollar.

are less successful than those of from the fifth to the tenth series; these last in one day form a compact sheet covering the whole surface of the liquid.

I have inoculated the liquid of the culture to sheep; the result was pustules which reach their maximum after fifteen or eighteen days. These pustules never suppurated, and disappeared without giving rise to any general eruption and without cicatrices; one could scarcely feel a little hard indurated nucleus in their seat of evolution. The temperature rose towards the fifteenth day, from a fifth to the tenth of a degree.

I shall soon determine if the inoculations with culture have given immunity to the animals, as I am now inoculating with the virus of animals affected with contagion, animals which have recovered from the cultivated small-pox.

Cultures of the microbes of small-pox were carefully filtrated. The filtrations observed during the three weeks had kept its limpidity. Two cubic centimeters of it injected under the skin of the axilla of a sheep, immediately after the filtration, has produced no local or general phenomena; the tumor resulting from the injection had disappeared the next day, and left no trace of its presence.—*Gazette Medicale*, (Academy of Sciences.)

COMPARATIVE PATHOLOGY.

INOCULATION OF GLANDERS TO THE DOG.

By M. V. Galtier.

The dog, like the rabbit, and more surely than the latter, takes glanders by inoculation. This is known of old. Here are the results of my personal experience:

Amongst the numerous dogs that I have inoculated with the virus of glanders, I have not met with one refractory case. But if the dog takes the disease when it is inoculated with the virus

the morbid phenomena remained generally localized at the point of inoculation. Shortly after the operation, from three to seven days, one notices a redness appearing in the region; at the point of inoculation a small ulcer shows itself, cupuliform, granular, yellowish in its aspect, analogous to the chronic farcinous ulcer of horses. This wound secretes abundantly a very thin pus, oily, yellowish-gray, which often dries in scabs over the ulcer, which, nevertheless, continues secreting under this scab.

The dog recovers quite rapidly from the effects of this inoculation, and the wounds, after increasing for several days, discontinue their growth, become rosy, their secretion by degrees diminishing; they cicatrize, and the virulency disappears.

It is quite generally admitted that in glanders of the dog the lesion and virulency remain localized at the point of inoculation; it has been even stated that this was the rule, without exception. This is incorrect; for while it is true that the lesions do ordinarily appear only at the point of inoculation, it is not always so. In one dog inoculated on the forehead, I have seen ulcerous sores appear at the point of inoculation and sometimes after, another formed itself on the external face of the right thigh, then one on the back, but even with this generalization, the disease ended and disappeared altogether, as I proved it afterwards, by inoculation and post mortem. Upon another dog inoculated behind the poll, I also observed ulcers at the point of the inoculation, but also another on the back. Lastly, in the dog, and in the rabbit, I have observed that if the lesions may remain localized at the points of inoculation, it sometimes happens that the virulency is disseminated through the economy, or at least in the lymphatic system. I once transmitted glanders to a donkey by inoculating him with the product of the ganglion of the flank of a rabbit, which presented lesions only at the ears, where it had beed inoculated; I have also given glanders to a donkey by inserting the pulp of a ganglion of the flank of a dog, inoculated near the shoulders, and which presented lesions only at that point. The virulency can then be generalized, though the lesions may remain localized. It thus seems that the virus of glanders may spread in the organization of the dog and sometimes in that

of the rabbit, without giving rise to anatomical lesions except at the points of the termination of inoculation.

It has been said that a first attack of glanders gave to the dog immunity after recovery.

From my experiments, it results that dogs can take glanders repeatedly, two, three, four, five and, perhaps, a greater number of times. But little by little, after a series of successive inoculations, its receptivity, already comparatively so slight compared to that of volipeds, diminishes. Glanders transmitted to dogs is characterised by lesions less and less marked, and there is reason to think that through the influence of repeated inoculations, their receptivity will disappear.

Another fact observed during my experiments tends to demonstrate that the power of the virus diminishes when cultivated in the organism of the dog already inoculated a first, second, third or fourth time; donkeys inoculated with the virus of a third, fourth or fifth glander have had a disease more latent and less acute; they ordinarily live from three weeks to a month after inoculation, and have presented less acute lesions than do those inoculated with the virus of horses, or that of a first dog-glander.—*Gazette Medicale.*

PATHOLOGICAL ANATOMY.

ON THE PRESENCE OF A FUNGUS IN THE PULMONARY TISSUE IN PLEURO-PNEUMONIA.

By M. Poincare.

After relating the principal researches relating to the microbes, which, according to some authors, constitute the virulent agent of the disease, the author says:

I have had thus far the opportunity of examining the lungs of eight cows which had died from pleuro-pneumonia. In all, with ttle variation, I have found the following facts:

The bronchial and pulmonary cavities are nearly filled with a magma, which at first sight, seems to be formed by epithelial cells and nuclei. However, this same muscular proliferation exists in the hyperthophied or œdematous zones of the connective tissue. But with a little care, and especially if one uses the iodochlorure of zinc as a reactive, one soon sees that in these magmas are found detritus, undoubtedly coming from the exterior, such as particles of straw, hay and starch granules, &c. This first kind of accumulation indicates only a high degree of prostration or depression of the nervous system, which suppresses the reflexes of expulsion. But along with these vegetable remains, one finds threads belonging to a cryptogamic production, which are living, and continue to manifest their vitality after the death of the animal. The mycelium of this vegetable parasite seems to extend quite through the pulmonary tissue in all directions, and embracing it in all its threads and meshes, a condition which renders its isolation difficult. But upon the edges of a section it is seen spreading here and there, either broken or perfect, almost always by keeping the section under a glass cover, or even simply between two glass plates, in an aqueous mixture, one may see after a variable period of time, that the threads of the mycelium lengthen, multiply and form a free, or rather well-defined mesh. The development takes place even when the tissue has been preserved for some time in glycerine, or in a mixture of water and chloroform. Still it is better and more distinctly observed with fresh pulmonary tissue. The best medium of culture is sugared water, as it furnishes the food of the vegetable parasite. The filaments of the mycelium are flattened, ramified, not separated, and have some irregularly disseminated vacuoles. The largest are from 0.0067 mm. to 0.m 0.0084, the medium sized, 0.0049mm. and the smallest or finest, 0.0036mm.

In an examination made immediately, the fruits easily escape the observation, because from their form, dimensions and general aspect they much resemble cells of the animal, which contribute to complete the vesicles. But if one places fresh tissue under a glass kept at a temperature of animal heat, there may be perceived, after two or three days, a well-marked odor of moisture.

From that time is seen a large quantity of small spores, with double lining and granular contents, which by their formation in the culture cannot be considered but as animal cells in the way of regression. The same element may then be easily detected in fresh and uncultivated tissue. Whether this fungus is the primitive cause of the disease, is a fact which further experiment and observation must decide.

REPORT OF CASE.

A CASE OF PERSISTENT HYMEN IN THE COW.

By L. P. Chase, Ashland, Ohio.

On the 15th of February, I was called to see a cow, three years old, a primipar, that had been in labor ten or twelve hours, and was not making any progress towards delivery. Upon making an examination I found a duplicature of mucous membrane of the vagina stretched across the passage, about four inches from the vulva, forming a complete septum, except a small opening in the centre, about half an inch in diameter. This membrane was sufficiently strong to resist the expulsive efforts of the animal.

By manipulation, I was able to introduce my fingers, one after another, through the orifice, and was able to lacerate the membrane sufficiently without the use of the knife.

After rupturing the fœtal membranes and allowing the liquor amnoi to escape, I made an examination of the fœtus, and found it in proper position, and by applying gentle traction to the legs during the expulsive efforts of the animal, delivery was soon effected.

The calf made a few convulsive struggles after being expelled; the heart beat regularly at first, but respiration was suspended, and all efforts to produce it failed. The cow is doing well. Persistent hymen, as far as I can learn, is exceedingly rare, at least where it offers any resistance to parturition.

EXTRACTS FROM FOREIGN JOURNALS.

UPON AN EPILEPTIFORM AND CONTAGIOUS AFFECTION IN THE DOG, DUE TO AN ACARUS OF THE AUDITIVE CANAL.

By M. P. Megnin.

A wealthy gentleman reported to me, that he had several hunting dogs, which all, though of different origin and various breeds, were affected with an epileptiform disease which, after several months of suffering, would end in death. This had continued for several years, and all the dogs that he buys, to take the place of the dead ones, after three or four months become affected with the same disease, and succumb to it. Though the kennel has been well disinfected several times and whitewashed, the epizootic persists continuously without change.

Desirous to study the disease and watch it *de visu*, I was given a beautiful terrier, which on account of its sufferings, the owner was about to have destroyed. During eight days, I watched him at all times, and witnessed the repeated epileptic attacks. I especially noticed the frantic shaking of the ears, which was almost continuous. By an examination of the interior of these organs, I found that the external auditive canal was lined with a thick layer of cerumen, of soot color, maculated with almost imperceptible little white points, which, under the microscope, proved to be acarus, of the species I described under the name of *chorioptis ecadantus*. I had already seen this parasite in other dogs, in cats and in ferrets, in the auditive canal of which animals they exclusively live, and I knew that in the cat this parasite gives rise by its tittilation, to true access of frenzy; but I did not know that in dogs these paroxysms could go so far as to resemble epilepsy. However, the presence of this acarus explained the contagious character presented in the affection as exhibited by all those dogs, a character which is very extraordinary in an epileptiform disease. And the proof that this parasite was surely the

cause of all the trouble is that injections of a solution of sulphuret of potash (potassic sulphuratum) one in twenty, repeated during the day, were sufficient to put a stop to the epileptiform symptoms of the dog I had under observation, and I have no doubt will rapidly put an end to the epizooty in question.—*Gazette Medicale.*

UPON A SUPPOSED MEANS OF PRODUCING IMMUNITY AGAINST ANTHRAX.

By M. Colin.

The results of the experiments he has made prove:

1st. That the virulency of the carbuncular blood dies out, or nearly so, between 55° and 57° Centigrade, for causes to be afterward determined.

2d. That in the cases where the blood warmed to that degree does not lose its properties, it produces anthrax with all its characteristics.

3d. That the warmed blood, whose virulency is lost, has no nocivious action and acts like that of a healthy animal.

4th. That this same blood, whose virulency has been destroyed by heat, does not insure immunity, for animals inoculated with it will afterwards take anthrax as easily as others, and die from it in the ordinary length of time, presenting all the characteristic lesions of the disease.—*Bulletin of the Academy of Medicine.*

A CASE OF ACUTE PHTHISIS, PRODUCED BY DIRECT CONTAGION, IN A DOG.

By Dr. H. Cullimore.

About six years ago the author had a patient suffering with advanced pulmonary phthisis. This man, who coughed much, had profuse expectoration. A dog had the habit of licking and swallowing this sputa. Several days after the death of the man, the

dog began to lose his appetite, and soon refused all food. Emaciation made rapid progress before long, and he had a severe cough. Auscultation revealed, in the greater part of the chest, the existence of moist, mingled with sonorous and sibilant rale. The general condition grew worse for eight or ten days, when the animal was taken with convulsive fits, lasting about five minutes, and occurring several times a day. The poor animal was then destroyed with prussic acid.

At post-mortem there were found recent adhesions of the two pleura; the lungs were filled with nuclei of softening, presenting the different periods of caseous degeneration; the bronchia were filled with purulent matter. The bronchial ganglions were not examined.

The meninges seemed thickened, and when divided allowed the escape of some serosity. They were free from tuberculous deposits.—*British Medical Journal.*

NEW EXPERIMENTS UPON THE CULTURE OF BACTERIAS OF ANTHRAX IN EARTH.

By M. Colin.

The resumé of the work is as follows:

1st. Sixty-one animals have with impunity, and at four different times, during the summer or fall of the year, eaten the whole of the grass which had grown on the ground where sixty carbuncular cadavers had been buried, from the end of March to the end of July.

2d. Eleven animals had also, with no less impunity, partaken of the oats and hay moistened with the water which had been used in washing the earth taken from and mixed with large amounts of detritus of those cadavers.

3d. Seven animals penned during 4, 5, 6, 12 and 15 days upon cadavers of anthrax, buried to a slight depth, have taken their food always covered with the dirt and earth which may be supposed to be loaded with the virulent element. Besides four other

animals have eaten for three weeks a kind of mixture of earth taken from the spot where twenty-one cadavers had been buried, from the end of March to the beginning of July.

4th. Ten animals have received into extensive recent wounds, and in the sub-cutanous cellular tissue the waters of the washing of the earth taken upon several cadavers, and mixed with the detritus of these cadavers.

5th. Lastly, six animals have been submitted to inoculation with the products of the culture of the hypothetical germs of the earth in the blood, the serosity and the urine. And none of the ninety-eight animals used in these five series of experiments contracted anthrax, even in a local form, such as tumor, œdema or pustule.

The only one of the number which had been sick, and which died after a single cutaneous injection, presented no symptoms or lesions of anthrax. Its blood was free from bacterides and virulent properties.—*Gazette Medicale.*

A CASE OF PARTIAL LUXATION OF BOTH PATELLÆ IN A TWO-YEARS OLD CART FILLY.

By M. G. H. Golding.

A two-years old grey cart filly had an enlargement on the point of the near shoulder, caused by a badly fitting collar. A seton was introduced through it, and directions given for after treatment.

While standing behind the filly and taking a casual glance at her, a peculiar snapping sound was heard, proceding from the stifle joint. Removed from the stable, it was observed that she had great difficulty in turning, and on close examination it was found that she could not rest on either hind leg, except for a few seconds. An unnatural prominence of the outside of each stifle joint was also noticed, and when the filly moved or changed her position the patellæ moved on and off the condyles of either joint, causing a peculiar snapping noise. On inquiring into the

history of the case, it was stated that she had been in that condition from the time she was taken up, some four weeks previous. A blister was applied over the whole surface of each joint, and if unsuccessful the actual cautery will be applied.—*The Veterinarian.*

GLANDERS—THE DIFFERENT DIAGNOSIS OF EQUINE PULMONARY NODULES.

By Dr. Johann Csokor, (Veterinary Institution, Vienna.)

Pulmonary nodules are almost universally acknowledged to be associated with glanders. But from pathological history and careful microscopical examination of these, I am inclined to believe that they are, in many cases at least, perfectly innocuous, and independent of the glander poison. Nodules of various sizes are found in the lungs of horses affected with nasal glanders, and not unfrequently in those which present no signs of that disease. They are characterized by having bright-red or black-red zones of various extent surrounding them, and they usually have a whitish-yellow or grey mass embedded in the centre, which can be easily separated with a knife. These bodies are generally spoken of as "pulmonary" nodules, but they are rarely accurately described in detail; and many veterinary surgeons speak of these as "glander" nodules. In reality, they are nothing more nor less than *emboli of the pulmonary vessels.*

There is another kind of nodule frequently found in the lungs, which has also been similarly described. These are white, firm, hard formations, and present no signs of surrounding irritation, although their origin is due to the same cause.

If we now compare a section of a true glander nodule, taken from the nasal mucous membrane, with one of those surrounded by a red zone in the lung, we shall find that they do not follow the same process of formation and degeneration. The glander nodule is characterized by its centre quickly undergoing degenerative changes. The cellular elements, which are undistinguish-

able from lymphyid elements, undergoes necrobiosis, and a structureless mass is the result. In the glander ulcer, this detritus escapes, and the process may be observed in progress at the periphery of the ulcer.

The other nodular formations, which are surrounded by the inflammatory zone, are less firm, possess a perfectly round form, and the fibrous tissue at the periphery resembles, and in reality is the middle layer of the vessel. This vessel surrounds a fibro cellular mass, and much resembles a small clot. If we examine several of these nodules, in various stages of their development, we shall find an accumulation of blood cells at the periphery, (the red zone) and frequently extravasations into the surrounding tissue (dark red or black zone), with inflammation, *i. e.*, an escape of the white blood-corpuscles out of the capillaries, which may be seen surrounding the nodule, in the walls of the vessel and in the fibrous tissue outside the vessel, forming a fibro-cellular mass. New blood-vessels are formed, and pass into this newly formed mass, and into the wall of the old blood-vessel. The fibro-cellular mass, as well as the clot-like portions in the centre, now separate with small irregular portions between the spaces of which the new blood-vessels penetrate; in fact we may say we have an organized thrombus. At a later stage the whole becomes vascular and nutritious, and the leucocytes which normally escape from the vessels into the surrounding tissue alter their shape and send out processes and form a new connective tissue. Consequently the red zone which formerly surrounded the nodule becomes lighter in color, and at a still later period, instead of a nodule surrounded by a red zone, we find a firm, tense, greyish-white nodule, composed of fibrous tissue. In this case it will be seen the process is *progressive*, whereas, in the case of the *glanders nodule* it is *retrogressive*. It, therefore, appears to us that we are not justified in considering all nodules that may be surrounded by a zone, or that are white and firm, to be of a malignant element, and produced by the glander poison. Although other authors have drawn attention to these nodules in a similar manner, still I would particularly desire to draw attention to the process of vascularization and organization of the thrombus, and it is on this account

that I send the present communication, in order that other observers may further investigate the subject.— *Veterinary Journal.*

OSTEOMALACIA AND RACHITIS.

By. S. Roloff.

By long privation of calcareous principles, Roloff has succeeded in producing in young dogs, not only an arrest in the general nutrition, and in the increase of weight, but also the clinical phenomena and anatomical lesions of rachitis. Three dogs, five-and-a-half weeks old, of the same litter, and in robust condition, received each day 200 gramms of horse-meat, 60 of starch, 30 of sugar and 10 of oil. The first had each day in addition 10 gramms of phosphate of soda, and a like amount of phosphate of magnesia, in 200 grams of water; the second, in addition to this saline solution, had 10 gramms of phosphate of lime; the third had neither lime nor phosphates.

The second increased much more rapidly in weight than the others. The autopsy exhibited in the first and the third, the lesions of rachitis. A counter-experience is founded by the treatment of a rachitic young dog, which recovered in three months by the use of phosphate of lime.

Experiments made on goats and sheep could not be followed to the end, because those animals refused the food given, and starved themselves rather than take it. The author reports only two cases of lesions of osteo-malaria, in a goat and a ewe, which had lost much in calcareous principles by excessive lactation.

TREATMENT OF FOOT AND MOUTH DISEASE BY SALICYLIC ACID.

Salicylic acid has recently been employed by the Duke of Brunswick in the treatment of this disease, with surprising results, a cure being obtained within a few days. A solution was made by adding about three tablespoonsful of the acid to one

gallon of lukewarm water, the acid being previously dissolved in a little hot water. The mouth and feet of the animal were well washed, three times a day, with this solution, and the tops of the hoofs well powdered with dry acid, after each washing. Two tablespoonsful of the acid, dissolved in warm water, also placed in the drinking water of the animals, much increased the effect. During the treatment, strict cleanliness is preserved in the stables or sheds; and to prevent further infection, the dung is saturated with the salicylic solution. Most satisfactory results have also been obtained by this treatment in Alsace.—*Veterinary Journal.*

NEW MODE OF CONTROLLING THE HEAD OF THE HORSE WHEN THROWN DOWN.

By. MM. Bernadot and Butel.

As the struggles of the horse when thrown down are often followed by serious injuries, and especially by fracture of the vertebral column, when the head and neck are powerfully flexed, the following apparatus has been invented. It is said to work well.

It consists of a wide surcingle, with two straps united into one, V shaped, alongside the upper border of the neck, and provided with a buckle; then, a halter having one buckle in the middle of the nose piece, and a strap attached to it which passes through a ring placed on the poll strap of the halter. When the animal is down this strap is secured to the single buckle of the bands of the surcingle, and the head can be brought and kept in its greatest position of extension. The apparatus seems to work something like the Kimble-Jackson check-rein.—*Archives Veterinaire.*

TRIPLE GESTATION IN A MARE.

A mare was suffering with after-pains and placental retention. The mare was nine and a half months gone with foal, and had thrown twins a few hours before assistance was called. On the

arrival of the veterinarian, he was told that she was very ill, and the animal was found with a *third foal* behind her. The little creature was alive, as was also the second one at birth, the first fœtus being dead. As the mare was in great pain, and straining severely, the after-birth was with some difficulty removed at once, profuse hemorrhage following. 4½ grains of solution of muriate of morphia was injected, sub-cutanously, and the straining and the hemorrage ceased almost at once. The mare, which was twenty-one years old, made an excellent recovery. She had twins two years before, both premature.— *Veterinary Journal.*

LIQUID FOR THE PRESERVATION OF ANIMAL AND VEGETABLE STRUCTURES.

Mr. Wickersheimer, of the Zootomical Museum of Berlin, uses the following preservative and antiseptic liquid. One hundred gramms of alum, 25 of common salt, 12 of salpeter, 60 of potash, and 10 of arsenious acid, are dissolved in 3 liters of boiling water. Ten parts of this, 4 of glycerine, and 1 of methylic alcohol are added before use.

The substances to be preserved are either injected with the liquid, moistened with it by means of a brush, or immersed in it.

The great advantage of the mixture is that it preserves the softness, flexibility and color of fresh vegetable or animal tissues.

SOCIETY MEETINGS.

UNITED STATES VETERINARY MEDICAL ASSOCIATION.

The eighteenth semi-annual meeting of the United State Veterinary Medical Association was held at Young's Hotel, Boston, March 15th, 1881, at 12.20 P. M. Twenty-four members were present.

The committee appointed at the last meeting to secure the concurrence of the different veterinary colleges of America in

lengthening the term of studies, etc., of all the colleges, reported progress. The Comitia Minora reported favorably to the meeting the names of the following gentlemen, as members of this Association: Drs. E. Hanshew, D. Cochran and Thos. Blackwood. By a unanimous vote they were admitted as members. Drs. J. Dougherty, R. H. Harrison, M. Bunker, J. Ed. McNicol, D. J. Dixon, W. W. Burt and Jos. Bushman were proposed for admission as members at the next meeting of the Association.

Dr. C. P. Lyman then read a report of the microscopic examination (by Dr. Whitney) of the lungs, taken from American cattle that were landed in Liverpool, and which were said to be affected with contagious pleuro-pneumonia. He also presented drawings of portions of the lungs. The subject was discussed by Drs. Robertson, Liautard, McLean, Stickney and others.

The secretary read a communication from Dr. A. A. Holcombe, relating to army veterinary surgeons, their rights, duties, etc., etc., asking the support of the Association in making the veterinarian's position in the army what it should be. Dr. Liautard moved that a committee be appointed to whom the matter be referred, and that said committee take such action as may be deemed advisable. Drs. L. McLean, Bryden and Michener were named by the president to constitute this committee.

Dr. Peabody read a paper, describing some cases of phthisis pulmonalis verminalis, as seen by him, and showed specimens of the parasites under the microscope. A photograph of portions of the bronchial tubes containing the fully developed parasites was also presented. An interesting discussion followed as to the manner by which the ova are taken into the system, and how they are developed in the trachea and bronchii.

Dr. Robert Wood gave a short account of a case of sarcocele, accompaning his report with the specimens. The testicle, which weighs five and one-half pounds, was presented to the museum of the American Veterinary College.

In view of the increasing demands made upon the time of the editor of the AMERICAN VETERINARY REVIEW, the society decided to present the journal to Prof. A. Liautard, without any encumbrance, as a slight recognition of the work he has done for

the Association and profession at large. The gift was accepted, and thanks returned to the society in a feeling manner.

A spirited and general discussion then took place on the subject of trichinosis, hog-cholera, foot and mouth disease, and pleuro-pneumonia, especially in reference to the extent of their existence in the United States, and of the restrictions they impose upon our foreign trade.

During the course of the discussion it was shown how *imperative* it is to thoroughly disinfect all vehicles on which infected animals have been carried. A hearty vote of thanks was extended to the gentlemen for their papers, after which the Association adjourned to meet in New York next September.

C. B. MICHENER,
Secretary.

CONTAGIOUS DISEASES IN EUROPE.

PLEURO-PNEUMONIA IN FRANCE.—On account of the appearance of this disease in several Spanish localities, the importation of cattle is prohibited, and is closed in the different towns lying on the French frontiers.

TEXAS FEVER IN ENGLAND.—The possibility that some of our western cattle landing in England may introduce the Texas fever into that country, seems to have aroused the fears of the officers of the Privy Council. Prof. Brown has made a report, which is published in a new Blue Book, recently issued, where the peculiar difference between that disease and the home splenic fever are described, and the dangers of the importation of the disease on English soil fully explained.

TRICHINOSIS IN FRANCE.—On account of the discovery of trichina in some samples of salt pork imported from the United States, found in the markets of Lyons and Paris, the importation of American pork has been prohibited in the different

French ports, with some allowance in peculiar cases. The meat is to be carefully examined by veterinarians, before it is allowed to be placed on the market.

TRICHINA IN SPAIN.

American pork is prohibited in Spain, as it has already been in several of the European countries.

It is reported that so far the trade in this branch of exportation has been reduced from 30 to 40 per cent. If one thinks that for one country alone—France, 19,000,000 of dollars—a figure which was yearly increasing, are thus lost us, what must be the enormous loss that our exportation will endure by having all these countries, Spain, Italy, England, Russia, Austria, Portugal and Greece, closed to our importation.

CORRESPONDENCE.

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., Feb. 9, 1881.

Prof. A. Liautard, American Veterinary College, New York:

DEAR SIR:—I am happy to be able to inform you that the outbreak amongst cattle at Bedford, Iowa, recently reported through the newspapers to be one of contagious pleuro-pneumonia, is not that disease.

This I have from the report, by telegraph, of Doctors McLean, of Brooklyn, and Detmers, of Chicago, who were recently sent to the localities for the purpose of examining the herd in question. The report of this examination has not yet reached me.

Very truly yours,

CHARLES P. LYMAN,
V. S. to U. S. Dept. of Agriculture.

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., February 18, 1881.

SIR:—I have just received the oral report of Dr. McLean, and in advance of his written report, which will be published as soon as possible, hasten to inform you that the pulmonary trouble from which animals in Iowa, Missouri and Illinois have died, and which in some way or other unknown to this Department was reported as contagious pleuro-pneumonia, proves to be without doubt that form of disease caused by the presence in the lungs of these animals of the strongylus micrurus. That, also, wherever a large percentage of mortality obtained, it was found to have been caused by *black quarter*, uncomplicated by any specific lung trouble whatever.

Yours very truly,

PROF. A. LIAUTARD. CHARLES P. LYMAN,
V. S. to U. S. Dept. of Agriculture.

ASSEMBLY, No. 279.

STATE OF NEW JERSEY.

INTRODUCED MARCH 1, 1881, BY MR. BEEKMAN.

AN ACT to prevent any person from falsely assuming or practicing any of the degrees of veterinary medicine or surgery.

1. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey*, That it shall not be lawful for any person or persons practicing veterinary medicine or surgery in this State, in any of their branches, to assume or affix to their names, business cards, bills or advertisements, any of the degrees or titles properly belonging to and granted only by legally chartered veterinary colleges and universities, or medical schools having power

by law to grant diplomas or veterinary medical certificates, unless said person or persons shall be regular graduates from such institution, and shall hold and possess a diploma or medical certificate therefrom.

2. *And be it enacted*, That any person or persons falsely or fraudulently assuming or advertising themselves as veterinary surgeons, or doctors of veterinary surgery or medicine, or claiming the possession of any of the degrees or titles conferred upon veterinary surgeons from legally chartered veterinary colleges, universities or schools, shall be deemed guilty of a misdemeanor, and upon conviction, shall be punished by a fine of twenty-five dollars, said fine to be sued for and recovered in an action of debt by any person who will sue for the same; and in default of payment of said fine, the offender shall be imprisoned in the county jail for a period of not less than two nor more than six months; *provided always*, that such persons be liberated at any time by paying the amount of said fine and costs; and should such person or persons be convicted of a second offence, they shall be imprisoned for a period of not less than one year.

3 *And be it enacted*, That every legally qualified veterinary surgeon shall, before entering upon the practice of their profession, deposit a copy of their diploma or medical certificate with the county clerk in the county in which they reside or sojourn, and shall pay said clerk ten cents for filing the same in his office, said copy to be a matter of record and open to public inspection.

4. *And be it enacted*, That nothing in this act shall be so construed as to prevent any person or persons not in possession of a regular diploma or medical certificate from *practicing* any of the branches of veterinary medicine or surgery in any county of this state in conformity with the first section of this act.

5 *And be it enacted*, That this act shall take effect immediately.

OBITUARY.

ERNEST TRAVER.

The telegraph brings us the sad news of the death of this young veterinarian, which took place from an overdose of strychnine, taken by him on the evening of the 23d of March.

A graduate of veterinary medicine at the old New York College of Veterinary Surgeons, in 1875, at the head of his class, Ernest Traver, a quiet, unassuming young man, was a hard student, who, though he left his alma mater with honors, was not forgetful of the treasures which medicine afforded him in his studies; and his might be said to have been a constant and continued student life. After he graduated he went to Rhinebeck, and succeeded in a short time in obtaining a good country practice there. But this was not sufficient for his investigating mind; and, as he was preparing to go to a larger city where he thought he could find better opportunities, he became connected with the breeding establishment of Mr. Pierre Lorillard, where, for several years, Doctor Traver practiced his profession on the animals kept at this world-wide haras. But a few months ago he left this place, and, after passing a short time in New York, where he busied himself in the purchase of books and other means for study, and in taking the steps for the admission of his brother to the American Veterinary College, he returned to Rhinebeck, where his useful life has been so suddenly cut short. Suffering from nervous debility, he had been accustomed to take small doses of strychnine. He had been in the village to attend the funeral of a friend, and, on returning home in the evening, as he stated to his poor father, "as it was dark in the room," took an overdose of this dangerous medicine.

Proud of him, his alma mater regrets him; almost unknown to her, the profession has lost with him one of her best members.

NEWS AND ITEMS.

Deserved Honor.—M. Pasteur has received the great gold medal of the Society of Agricultors of France, for his researches upon ferments and contagions in their agricultural and medical applications.

No Pleuro-Pneumonia in Connecticut.—In the report on diseases of domestic animals, it is stated that it is the opinion of the commissioners that pleuro-pneumonia has entirely vanished from that State, and that the only danger is from fresh importation of the disease.

New Insurance Company.—An insurance company has been formed in Prussia to insure against loss of hogs by trichina.

French Duties on Live Stock.—France is imposing increased heavy duties on imported live stock for the protection of her farmers.

Rarity of Trichinosis in Great Britain.—America sends annually to England some 700,000,000 pounds weight of hog products, and yet not a single case of death from trichinosis has ever been proved to have occurred in Great Britain.

Fall in Bacon Exportation.—Owing to the insane pork scare in Europe, the exports of bacon from New York fell off last week to 7,400,000 pounds. The average shipments for many weeks heretofore were 12,000,000 pounds.

More Percheron Horses.—Twenty pure bred Percheron horses have lately arrived in this city, imported by Mr. W. F. Walters, of Baltimore, Md. They are said to be a superior lot and as fine specimens of the breed as can be found in their native country.

NOTICE.

If those members of the U. S. V. M. A., who have not received certificates of membership, will acquaint the secretary of the fact, certificates will be sent them by express, to their addresses, at as early a date as possible.

C. B. MICHENER, *Sec'y*,
141 W. 54th St.,
New York.

EXCHANGES, ETC., RECEIVED.

FOREIGN.—Revue fur Thierheilkunde und Thierzucht, Gazette Medicale, Veterinary Journal, Veterinarian, Recueil de Medecine Veterinaire, Archives Veterinaire, Annales d'Brussells, Revue Dosimetrique, Clinica Veterinaria, Revue d'Hygiene, Journal de Zoötechnie.

HOME.—American Agriculturist, Prairie Farmer, Medical Record, Turf, Field and Farm, Medical and Surgical Report, Scientific American, Ohio Farmer, Practical Farmer, Medical Herald (Louisville).

COMMUNICATIONS.—Robert Wood, C. H. Peabody, C. B. Michener, F. S. Billings, L. P. Chase.

PAPERS.—Providence Journal, (Providence), Boston Herald.